U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Bunker Hill SF site ER - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region X

Subject: **POLREP #2**
Progress
Bunker Hill SF site ER

Smelterville, ID
Latitude: 47.5469330 Longitude: -116.1645230

To: Beth Sheldrake, EPA Region 10
Calvin Terada, EPA Region 10 (POLREP List)
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From: Eric Vanderboom, OSC
Date: 2/26/2019
Reporting Period: 2/16-23/2019

1. Introduction

1.1 Background

Site Number:		**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	NPL	**Operable Unit:**	
Mobilization Date:	2/8/2019	**Start Date:**	2/9/2019
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Emergency Response

1.1.2 Site Description

The Bunker Hill Superfund Site (Site) is located in the Coeur d'Alene Basin of Northern Idaho. The Site includes mining-contaminated areas in the Coeur d'Alene River corridor, adjacent floodplains, downstream water bodies, tributaries, and fill areas, as well as the 21-square-mile Bunker Hill "Box," where historical ore-processing and smelting operations occurred. The Site was listed on the National Priorities List (NPL) in 1983 and is assigned CERCLIS identification number IDD048340921. The Site is also known as the Coeur d'Alene Basin Cleanup. EPA has divided the Bunker Hill Superfund Site into three Operational Units (OUs); The OU 1 includes the populated areas of Bunker Hill Box and is where the current Bunker Hill Superfund Site Emergency Response (ER) is located.

1.1.2.1 Location

The location of on-site activities surrounds the Central Impoundment Area (CIA), slurry wall, I-90 subsidence zone, and the seep discharging into the Coeur d'Alene River. EPA and the Corps of Engineers recently completed construction of a subsurface groundwater cutoff wall in this same area, between the site and I-90 and the river. I-90, through this area, was constructed on top of historic mine waste. Groundwater levels are naturally high and there is a direct hydraulic connection between the site and the river. As a result, roadway subsidence and groundwater seeps are not historically uncommon. I-90 is a major east west transportation corridor through northern Idaho and is considered critical infrastructure. Within this area, an array of tasks associated with existing groundwater monitoring wells, new soil test pits, and new groundwater monitoring wells were prioritized.

1.1.2.2 Description of Threat

During EPA remedial cleanup activities which include the construction of a groundwater cutoff wall and collection system to collect and treat contaminated groundwater, a sediment seep was discovered in the South Fork of the Coeur d'Alene River in the vicinity of the cutoff wall. Additionally, over the course of a few days a subsidence had formed in Interstate 90 near the seep. EPA remedial program contractors have been investigating the source of the seep. Support from the EPA ER program was requested to provide rapid resources to identify the extent of the issue.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results
Region 10 mobilized one OSC to assist the Remedial Program. START and ERRS contractors have also been activated to support the assessment and mitigation.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

During the current PolRep reporting period, the EPA Region 10 Emergency Management Program continued to provide support to the EPA Region 10 Remedial Cleanup Program for the investigation of the situation and to initiate necessary mitigation measures. Details on the response actions performed during this reporting period are summarized below.

2.1.2 Response Actions to Date

Existing Groundwater Well Data Collection

START validated the laboratory results for the groundwater samples collected from the existing monitoring wells. The validated results were entered into Scribe, and the site file was uploaded to Scribe.net.

Test Pits

ERRS backfilled the soil test pits that had been excavated during the previous reporting period. While backfilling, ERRS installed piezometers in the test pits to allow for groundwater monitoring. The following test pit piezometers were installed: TP1W, TP0, TP1E, TP2E, TP3E, TP4E, and TP5E. A piezometer was not installed in the sixth test pit (TP6) because no water was observed at a depth of 15 feet. An 8 inch pipe was installed in TP6 to allow for dye tracer injection in the future.

The excavated soil from the test pits was moved to a stockpile in the central laydown area. Also, the drilling cuttings from the monitoring well boreholes were placed in this pile for disposal. Field analysis was performed on the soil using an XRF. Results were 1963ppm and 1996ppm for zinc. Results of all metals concentrations can be found in the START Trip Report for the site. The RPM determined that these results were sufficient to dispose of the soil in the associated Page repository. ERRS began to load the soil into over-the-road haul trucks for transportation to the nearby Page Waste Repository for disposal. By Thursday, 2/21, all of the soil was disposed of at the Page Repository.

Tank Farm and Conveyance Pipeline

Beginning Thursday, 2/21, ERRS began to receive 20,000-gallon frac tanks for temporary storage of groundwater from the extraction wells. ERRS received a total of six frac tanks during this period and established a tank farm area at the northwest corner of the laydown yard. ERRS also installed the inlet and outlet manifolds on the six frac tanks.

The US Army Corps of Engineers provided 3,000 feet of 10-inch HDPE pipe for use in the construction of a conveyance pipeline and ERRS moved that pipe to near the future pipeline location. ERRS and their subcontractor will fuse 50ft sections of 10-inch HDPE pipe together to build a groundwater conveyance pipeline that is over a mile long. This conveyance system will ultimately transfer groundwater that is pumped from extraction wells located around the slurry wall to a lined pond associated with an on-site water treatment plant. ERRS set up a station for the pipe fusion activities at the eastern end of the laydown yard, near the Central Impoundment Area (CIA) and the planned pipeline route. An ERRS subcontractor began to fuse-weld the sections of pipe together into 300-foot sections. To complete the pipeline, ERRS began the procurement process of additional sections of the 10-inh HDPE pipe.

Geophysical Survey

Sage Earth, as a subcontractor to START, continued to perform the geophysics survey of the interstate corridor. Specifically, Sage Earth continued to perform the seismic survey of the transects north and south of I-90. On Monday, 2/18, Sage Earth provided a preliminary report of the electromagnetic survey performed on Friday, 2/15. Sage Earth completed their surveys (including GPR, EM, and seismic) on Wednesday, 2/20, and demobilized from the site on Thursday, 2/21. Sage Earth is currently working to process and evaluate the geophysics data.

New Monitoring Wells

Environmental West, as a subcontractor to START, continued to use two sonic drill rigs to install new monitoring wells. Through Tuesday, 2/19, Environmental West installed 11 monitoring wells south of I-90 and north of the slurry wall (from west to east: UA-02, UA-03, UA-05, UA-07, LA-01, UA-08, UA-10, LA-03, UA-13, UA-14, and UA-15). During drilling, a START geologist logged the boreholes to record lithology data. After the wells were constructed, Environmental West installed the above-ground monuments and then START and Environmental West began to develop the monitoring wells. Through Saturday, 2/23, all but two of the south wells were developed.

On Wednesday, 2/20, Environmental West began to install monitoring wells on the north side of I-90. Because access to the north side of the interstate is obtained from the highway shoulder, EPA submitted a 511 notification for a highway lane closure to the Idaho Department of Transportation (ITD) and START subcontracted with a traffic control company to submit the traffic control plan and provide the necessary signs and traffic drums for the lane closure. The lane closure was performed during daylight working hours from Wednesday, 2/20, through Saturday, 2/23. During this period, Environmental West installed and developed three wells in the shallow aquifer (UA-04, UA-09, and UA-11). These wells were drilled, installed,

and developed by Saturday, 2/23 while the lane closure was in effect.

Environmental West also attempted to install a well in the lower aquifer at the LA-02 location on the north side of the highway. However, while drilling, a plume of surging water associated with the operation of the air rotary rig was observed in the South Fork of the Coeur d'Alene River, which indicated an apparent connection between the subsurface at the LA-02 location and the river. Because of this connection, EPA decided to stop drilling and the uncompleted LA-02 borehole was abandoned.

An ERRS-subcontracted surveyor visited the site several times to record the horizontal (latitude and longitude) and vertical (elevation) coordinates for the newly installed monitoring wells. The surveyor also recorded the horizontal and vertical coordinates of three surface water staff gages that were installed in the South Fork Coeur d'Alene River by the United States Geological Survey (USGS).

Extraction Wells

H20 Well Services, as a subcontractor to ERRS, arrived on site on Wednesday 2/20 to install the extraction wells. On Thursday, 2/21, H2O began to drill at the PW-1 location, and the well was installed by Saturday, 2/23.

Site Set-up and Logistics
ERRS continued to build and establish the site infrastructure, including clearing snow, establishing the support zones, constructing gravel pads for the frac tank farm, and installing a bridge over a drainage ditch to provide future access to the road leading to the lined pond associated with an on-site water treatment plant.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The Bunker Hill site is a current NPL site. Previous Known PRPs include:

Bunker Hill Mining Corporation

Placer Mining Corporation

Liberty Silver Corporation

Gulf Resources & Chemical Corporation

Pintlar Corporation

ASARCO, Inc.

Government Gulch Mining Company, Ltd,

Federal Mining and Smelting Company

Hecla Mining Company

Sunshine Mining Company

Callahan Mining Corporation

Union Pacific Railroad Company

2.1.4 Progress Metrics
Soil was transported from the test pits was transported to the Page Repository associated with the site. Material was transported in a tarped, 10-yard dump truck.
02/18/2019 - 6 loads
02/19/2019 - 9 loads
02/20/2019 - 14 loads

2.2 Planning Section

2.2.1 Anticipated Activities
The EPA Region 10 Emergency Management Program will continue to support the EPA Remedial Program in the investigation of the situation and initiation of mitigation measures.

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps
Environmental West and START will continue to develop the monitoring wells installed south of Interstate I-90.
The ERRS-subcontracted driller H2O will continue to install and develop the extraction wells PW-1 and PW-2 in preparation for the pump tests.
ERRS and its subcontractor will continued to build the conveyance pipeline from the frac tank farm to the lined pond which feeds into the Central Treatment Plant (CTP).
ERRS and START will prepare to support the EPA Remedial Program in performing the pump test on extraction wells PW-1 and PW-2.
START and its subcontractor Environmental West will plan for the potential drilling of additional monitoring wells on the north side of I-90.
2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$600,000.00	$300,000.00	$300,000.00	50.00%
TAT/START	$400,000.00	$300,000.00	$100,000.00	25.00%
Intramural Costs				
Total Site Costs	$1,000,000.00	$600,000.00	$400,000.00	40.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

USEPA
USACE
IDEQ
ITD

4. Personnel On Site

EPA
USACE
IDEQ
IDOT
START
ERRS
Jacobs
Environmental West Exploration
Sage Earth Sciences

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.